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EXAMINER	
TAYONG, HELENE E	
ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
10/03/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/522,465	HUMBERSOT, ALEXANDRE	
	Examiner	Art Unit	
	HELENE TAYONG	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed on 7/30/08.

By this Amendment, claim 10 has been canceled, without prejudice and without disclaimer of the subject matter. Claims 1-4 and 7-9 have been amended to correct informalities in the claim language and to more clearly define the invention. Claims 11-18 have been submitted for the Examiner's consideration. Claims 1-9 and 11-18 are pending in the application and have been considered below.

Response to Arguments

2. Applicants arguments regarding the rejection of claims 1-6, 8 and 9 under 35 U.S.C. § 103(a) as being unpatentable over DEDIEU et al have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-9 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dedieu et al (US 6879643) in view of Hellbery (US6337885).

(1) with regards to claims 1, 8 and 11;

Dedieu et al discloses a device (fig. 1, TZIF) for receiving (RS) an analog signal (from antenna) having a spectrum situated in a frequency band higher than a reference band centered around a zero frequency, referred to as the baseband, the device (col.5, lines 20-34 and lines 57-65) comprising:

reception means (fig.1, RS) for managing at least one narrow-band noise signal located around a noise frequency (CMOS technology, col. 5, lines 28-30), the reception means comprising a plurality of parallel baseband conversion means (MxA and MXB) defining a plurality of reception channels (I path and Q path) for converting the spectrum of the received signal into a corresponding plurality of reception bands, and

recombination means (fig. 1, BT) for constructing, the received signal on each reception channel, a single spectrum corresponding to the spectrum of the received signal without the narrow-band noise signal (col.6, lines 11-18).

Dedieu et al discloses all of the subject matter discussed above, but for specifically teaching conversion means defining a plurality of reception channels for converting the spectrum of the received signal into a corresponding plurality of reception bands having a plurality of reception frequencies, close to the baseband, the spectrums of the reception bands being shifted relative to one another so that the narrow-band noise signal is superimposed on each shifted spectrum different points relative to the spectrum.

However, Hellberg in the same endeavor (radio receiver) discloses in figs. 2, 4 and 5 a baseband processor (20) that uses multiple A/D branches during concurrent sampling intervals simultaneously digitize the received signal at the first digitized

frequency f1 and the second digitized frequency f2 with offsets (col.4, lines 15-37).

It would have been obvious to one of ordinary skill in the art to have substituted the (I and Q) input and (IQPLL) of the system as taught by Dedieu et al with received signal and local oscillators of Hellberg in order to convert the spectrum of the received signal into a corresponding plurality of reception bands having a plurality of reception frequencies, close to the baseband, the spectrums of the reception bands being shifted relative to one another so that the narrow-band noise signal is superimposed on each shifted spectrum different points relative to the spectrum for the benefit removing spurious harmonics produced by non-linearities for A/D converters (col.2, lines 17-20).

(2) with regards to claims 2 and 9;

Dedieu et al further discloses the baseband conversion means (MXA and MXB) are configured to shift the spectrum of the received signal symmetrically with respect to the zero frequency (col. 5, lines 37-65).

(3) with regards to claims 3 and 4;

Dedieu et al further discloses the reception means (fig. 1, RS) manage a single narrow-band noise signal located around a given noise frequency (CMOS technology, col. 5, lines 27-30) and comprise, on a first reception channel (I path) , first baseband conversion means (MXA) for converting the spectrum of the received signal in a first reception band close to the baseband centered around a first reception (col. 5, lines 39-65) frequency and on a second reception channel (Q path), second baseband conversion means (MXB) for converting the spectrum of the received signal in a second reception band close to the baseband centered around a second reception frequency (

col. 5, lines 39-65) and the recombination means (BT and col. 6, lines 11-18) comprise:

on one of the two channels (I path and Q path), filtering (FPBAO) means for filtering the received signal in a first frequency band around the noise frequency, on the other channel, and filtering means (FPBBO) for filtering the received signal outside a second frequency band centered around said noise frequency (col. 5, lines 65-67 and col. 6, lines 1-10), addition means (implicitly disclosed in fig. 1, BT) for adding the signals coming from said first and second reception channels (col. 6, lines 11-18).

Dedieu et al discloses all of the subject matter discussed above, but for specifically teaching shifted spectrum of the signal received at distinct points relative to said spectrum.

However, Hellberg in the same endeavor (radio receiver) discloses in figs. 2, 4 and 5 a baseband processor (20) that uses multiple A/D branches during concurrent sampling intervals simultaneously digitize the received signal at the first digitized frequency f1 and the second digitized frequency f2 with offsets (col.4, lines 15-37).

It would have been obvious to one of ordinary skill in the art to have substituted the (I and Q) input and (IQPLL) of the system as taught by Dedieu et al with received signal and local oscillators of Hellberg in order to convert the spectrum of the received signal into a corresponding plurality of reception bands having a plurality of reception frequencies, close to the baseband, the spectrums of the reception bands being shifted relative to one another so that the narrow-band noise signal is superimposed on each shifted spectrum different points relative to the spectrum for the benefit removing spurious harmonics produced by non-linearities for A/D converters (col.2, lines 17-20).

(4) with regards to claim 5;

Dedieu et al further discloses a digital television receiver (fig. 1) comprising a device (TZIF) (col. 5, lines 1-3 and lines 63-65).

(5) with regards to claim 6;

Dedieu et al further discloses a multimedia receiver (fig. 1) comprising a device (TZIF) as claimed in claim 1(col. 5, lines 1-3 and lines 63-65).

(6) with regards to claim 7;

Dedieu et al implicitly discloses in a transmission system (Satellite, col. 1, lines 21-10-30) comprising:

at least one emitter intended to emit electrical signals (implicitly discloses in col. 1, lines 21-10-30);

a transmission network for transmitting said signals (implicitly discloses col. 1, lines 21-10-30) , and

a receiver (fig. 1) as claimed in claim 5 for receiving said signals.

(7) with regards to claims 12 and 13;

Dedieu et al further discloses wherein each of the first converted signal and the second converted signal comprises a complex quadrature signal (fig. 1, CANA and CANB) (col6, lines 3-11).

(8) with regards to claim 14;

Dedieu et al further discloses wherein a combined spectrum corresponding to the signal spectrum is constructed by combining the first spectrum of the first digital signal

and the second spectrum of the second digital signal (fig. 1, BT and col. 6, lines 11-19).

(9) with regards to claims 15 and 17;

Dedieu et al discloses wherein the first reception channel further comprises a filter for filtering the first digital signal in a first band around a noise frequency (fig. 1, FPBAO or FPBBO) ; and

Dedieu et al discloses all of the subject matter discussed above, but for specifically teaching wherein the second reception channel further comprises a third mixer for shifting the corresponding spectrum by a difference between the first frequency and the second frequency, and a filter for filtering the second digital signal outside a second band centered around the noise frequency.

However, Hellberg in the same endeavor (radio receiver) discloses in (figs. 2, 4 and 5 a baseband processor (20) that uses multiple A/D branches during concurrent sampling intervals simultaneously digitize the received signal at the first digitized frequency f1 and the second digitized frequency f2 with offsets (col.4, lines 15-37) and LPF (54 and 56).

It would have been obvious to one of ordinary skill in the art to have substituted the (I and Q) input and (IQPLL) of the system as taught by Dedieu et al with received signal and local oscillators of Hellberg in order to convert the spectrum of the received signal into a corresponding plurality of reception bands having a plurality of reception frequencies, close to the baseband, the spectrums of the reception bands being shifted relative to one another so that the narrow-band noise signal is superimposed on each shifted spectrum different points relative to the spectrum for the benefit removing

spurious harmonics produced by non-linearities for A/D converters (col.2, lines 17-20).

(10) with regards to claims 16 and 18;

Dedieu et al implicitly discloses an adder (fig. 1, BT) for adding the filtered first digital signal and the filtered second digital filter to provide a combined signal having the combined spectrum (col.6, lines 11-19).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee (US 6169733) discloses a multiple mode capable radio receiver device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE TAYONG whose telephone number is (571)270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helene Tayong/
Examiner, Art Unit 2611

September 26, 2008
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611